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Title of Innovation: Population Health Based Disease Management Clinic

Date Submitted: 10/21/2004

Date Project Initiated: 10/21/2004

Background: Evidence based medicine research has shown that proactive management of diabetes, asthma, and other chronic diseases, reduces health care costs and improves quality of life for patients. Outcome data confirms that patients receive the highest quality care through participation in an efficient, cost saving, and patient education focused management program.

Methods: The objectives of the Disease Management/Population Health Initiative are: to improve the health of patients who have been diagnosed with asthma, diabetes, hypertension, or nicotine dependence; to ensure consistent, evidence based care is provided to identified populations; and to develop tools that will aid the Primary Care Manager (PCM) in meeting the evidence based metrics for patients with identified diagnoses. The Disease Management Clinic (DMC) was initially implemented to address challenges in meeting the goals of the clinical practice guidelines (CPG). CPG outcome data from 1999 to 2000 identified wide variations in care among providers, inconsistent compliance with evidence based guidelines, provider concerns with CPG implementation, and no systematic process for patient education. In November of 2001, clinic space, staff, equipment, and supplies were redistributed from the Primary Care and Internal Medicine Clinics to create the DMC. The intent was to immediately improve organizational focus on the proactive management of disease. The clinic is currently staffed with three registered nurses, a medical assistant, and a clerk. Additionally, pediatric and internal medicine providers, a clinical pharmacist, a dietician, a physical therapist, and a respiratory therapist participate in education, training, and management. The nurses are the “Program Managers” for the adult and pediatric asthma, diabetes, and hypertension programs. The respiratory therapist manages the tobacco use cessation program. Patients for the DMC are identified through PCM referral, patient self-referral, and review of Emergency Room and Urgent Care Center visits. Upon referral to the DMC, the program managers perform a thorough assessment to identify individual educational, medical, and social needs, and then assist the patient in establishing goals toward better management of their health. The program managers coordinate follow-up care and ancillary testing based on program guidelines and clinical outcomes. Interdisciplinary group classes are provided for diabetes, asthma, hypertension, and tobacco use cessation programs. Upon completion of the individual goals, the patient is issued an action plan and receives medical management by their PCM or is referred to appropriate specialty care. This intensive program management dramatically decreases the demands on the providers, improving productivity in the Internal Medicine and primary care clinic.

Results: Since November 2001, the DMC has collected clinical outcome data for the metrics established by DOD/VA guidelines. Outcome data is collected and aggregated by the Utilization Management Coordinator. The data is reported to the Clinical Outcomes Committee for further analysis, trend identification, and process improvement. The data clearly demonstrates a greater than 10% improvement each year, and the current metrics for each disease state have achieved 90% compliance. In the asthma program, 95% of asthmatics are on long term controllers (national average

65%). The average number of PCM visits for respiratory illness has decreased from 4.3 visits in 2001 to only 3.0 visits in 2004, allowing improved access for primary care enrollees. The diabetic program also showed consistent improvements. Currently, 93% of all enrolled diabetics have had a HgbA1c completed in the last 12 months (national average 72%), and 91% of this population have a HgbA1c less than 9.0 (national average 63%). Most significantly, the average HgbA1c for our diabetic population is 7.07 (national average 9.7). The tobacco use cessation program has a validated 12 month quit rate of 40%, far exceeding the 21% national quit rate. Not surprisingly, in July 2004, JCAHO surveyors noted that the disease management initiative at our facility was the best program they had surveyed. As of June 2004, our facilities' outcomes for diabetes and asthma were above Health Employer Data Information Set (HEDIS), Military Health System, and National Quality Management Program benchmarks. SAVINGS ANALYSIS. Traditionally, Disease Management Clinic cost savings rely on long-term goals and outcomes. However, certain short-term goals are also discernable. The first cost benefit is cost savings. Historically, internal medicine, pediatric, and community health have treated patients with the chronic conditions of asthma, diabetes, hypertension, and nicotine dependence. In 2003 and 2004, the per visit expense in internal medicine, according to the Medical Expense and Performance Reporting System (MEPRS), was $187 and $227, respectively. This included direct and indirect costs associated with the clinic. The clinic has relied heavily upon preexisting infrastructure and staffing, as well as minimal start up costs. Currently the clinic is equipped with $50,734 in equipment. The staffing of the clinic consists of personnel pulled from other clinics within the facility. The estimated clinic labor costs for 2003 and 2004 are $349,829 and $360,908. Cost per visit expenses for 2003 and 2004 were $46 and $61 per visit. The difference in cost per visit between internal medicine and the DMC for 2003 and 2004 are $141 and $161 per visit. The genesis of this cost savings was cost minimization and staffing ingenuity. The second short term benefit is cost avoidance. In FY 2002-2003, purchased care emergency room visits increased 21%; during the same period emergency room visits for DMC managed disease states decreased 17%. In FY 2003, overall emergency room costs increased 32%, while DMC related diagnoses decreased 3%. The graph above illustrates the actual purchased care cost of emergency room visits in FY 2001-2004. Potential costs are the forecasted costs of the Disease Management Clinic disease states if they accelerated at the same 32% rate as overall emergency room costs. The cost avoidance is the difference between the actual charges paid and the potential costs. The potential cost avoidance is $20,134.

Conclusions: The Population Health Based Disease Management Program at MCACH has resulted in improved patient care and decreased costs. The project can be implemented through redistribution of resources and staff training.

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